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Coyote
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Santa Clara Valley
Water District

Lower Silver Creek Flood Protection and Creek Restoration Project

December 19, 2000

Coyote Creek Watershed Program

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Agenda

- History of Lower Silver Creek Planning Effort
- Project Description
- Public Outreach
- Potential Project Enhancements

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Lower Silver Creek History

- 1978 Board Adopted Engineers Report and Lake Cunningham Agreement
- 1983 Final Watershed Plan and EIS/EIR (Adopted)
- 1998 Alternatives Analysis and Plan Update (Prepared by NRCS in cooperation with District and GCRCD)
- 1999 Submitted Corps Permit Application
- 2000 Initiated Preliminary Design

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Lower Silver Creek Watershed



Lower Silver Creek

Flood Protection and Creek Restoration Project

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1998 Plan Update Alternative Evaluation

Note: All costs based on 1998 NRCS reported values

Description of Alternatives	Pro	Con
1. Detention basins w/stream restoration (5 scenarios studied)	• Reduce concrete structures • Retain current habitat	• Capital cost ($36-108 M) • High O&M cost • Can't convey 100-year event • Loss hillside habitat
2. Bypass channels w/stream restoration (8 scenarios studied)	• Reduce concrete structures • Retain current habitat	• High capital cost • Traffic disruption • Serpentine Bunchgrass displacement • Archaeological sites
Preferred → 3. Hybrid channels	• Reduce concrete structures • Improve habitat condition • Reduce sediment	• Capital cost ($29.5 M)
4. Channel widening w/vegetated earth slopes	• Reduce concrete structures • Improve habitat condition • Reduce sediment	• High ROW costs • Public acceptance • Can't convey 100-year event

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1998 Plan Update Alternative Evaluation (Cont.)

Note: All costs based on 1998 NRCS reported values

Description of Alternatives	Pro	Con
5. Reduce level of flood protection	• Reduce concrete structures • Retain current habitat • Low capital cost	• Property damage • Public safety • Can't convey 100-year event • Water quality not improved
6. No action (Allow erosion)	• Reduce concrete structures • Retain current habitat • Low capital cost	• Property damage • Public safety • Can't convey 100-year event • Water quality not improved • Public acceptance • High O&M costs
7. Flood proofing	• Reduce concrete structures • Retain current habitat	• Property damage • 200/1412 homes protected • Public safety • Can't convey 100-year event • Water quality not improved • Public acceptance • High O&M costs

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1998 Plan Update Alternative Evaluation (Cont.)

Note: All costs based on 1998 NRCS reported values

Description of Alternatives	Pro	Con
8. Geomorphic stream restoration	• Reduce concrete structures • Improve habitat condition • Reduce O&M costs • Reduce sediment	• Very high ROW costs (300' wide) • 450 households displaced >$220 M • Public acceptance
9. Combined geomorphic and detention basins	• Reduce concrete structures • Improve habitat condition • Reduce sediment	• Capital cost $157 M • Loss hillside habitat • Increased O&M costs
10. Combined hybrid channel and bypass	• Reduce concrete structures • Retain current habitat • Reduce sediment	• Serpentine bunchgrass displaced • Can't convey 100-year event • Damage habitat in Coyote Creek • Archaeological site • Traffic disruption

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Comparison of Lower Silver Creek Planning Studies

1983 Recommended Plan

- 0.9 miles excavated earth channel
- 3.8 miles of concrete-lined channel
- 6.6 acres of plantings (riparian + wetland habitat)

1998 Plan Update

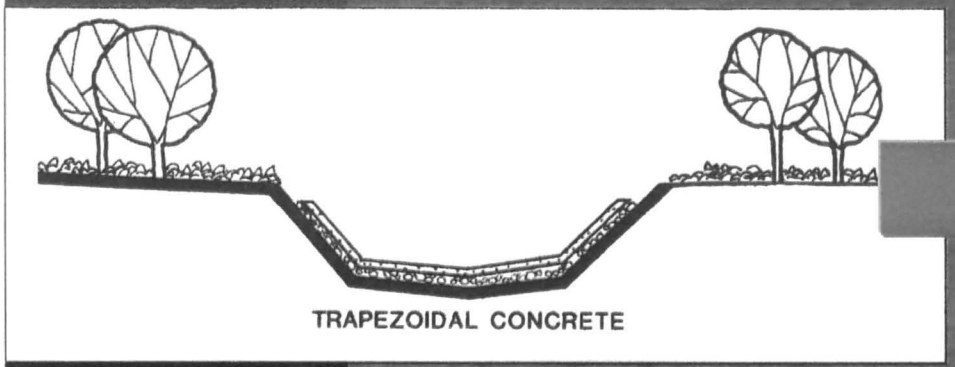
- 0.9 miles of excavated earth channel
- 1.2 miles of concrete-lined channel
- 0.4 miles retrofitted concrete-lined channel
- 2.2 miles of vegetated block channel
- 14 acres of riparian plantings
- 6 acres of wetlands

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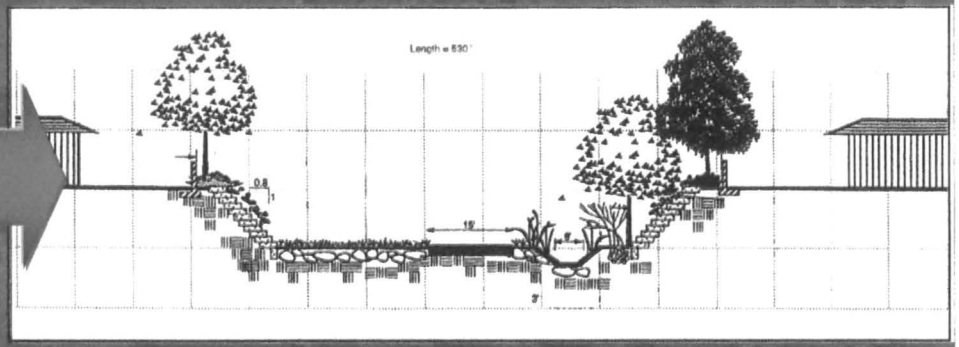
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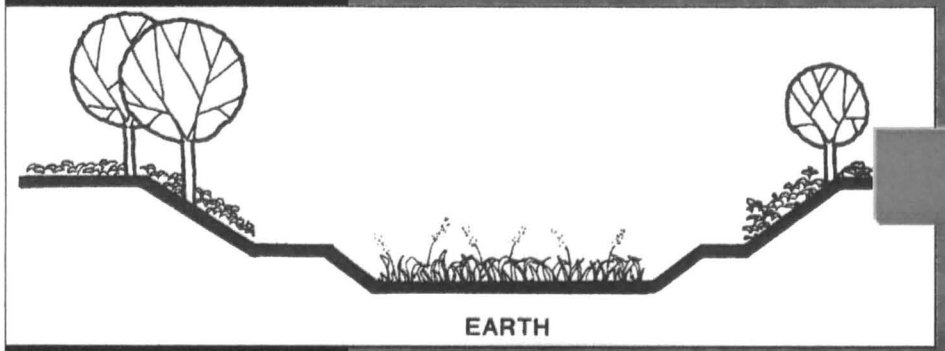
Reach 1

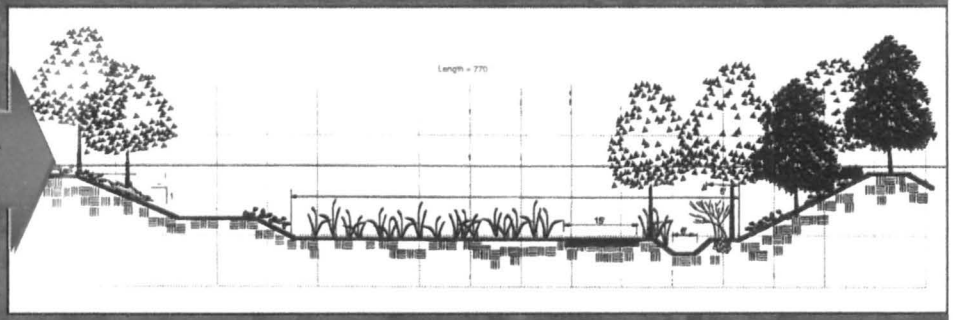
1983 Plan



1998 Plan Update







Lower Silver Creek

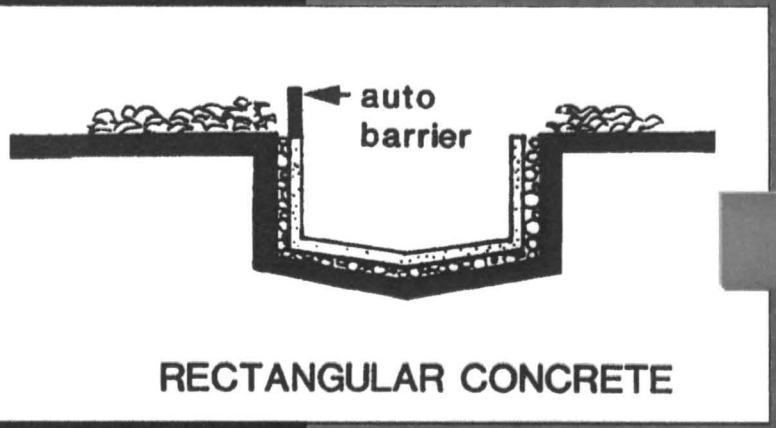
Flood Protection and Creek Restoration Project

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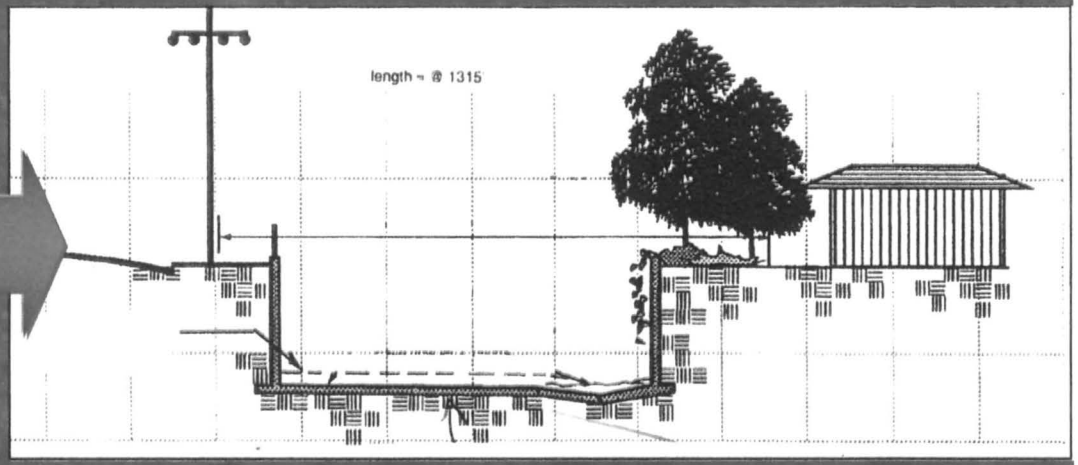
Santa Clara Valley Water District

Reach 2

1983 Plan



1998 Plan Update



Lower Silver Creek

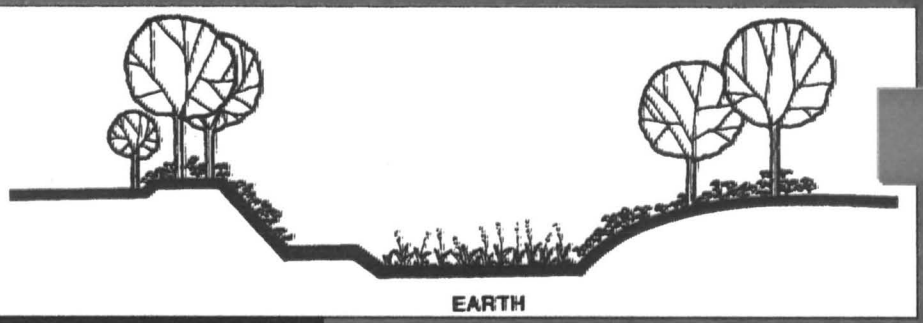
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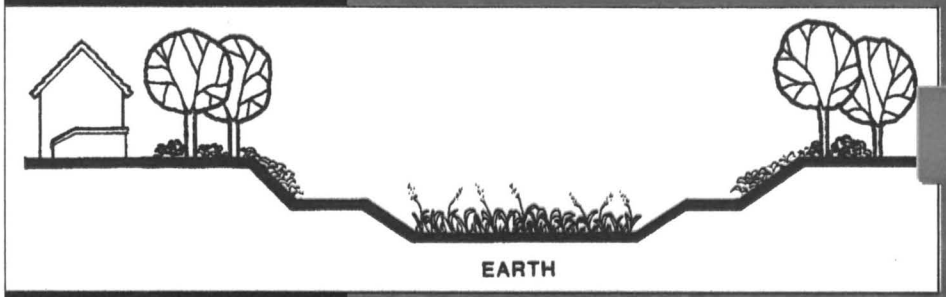
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Reach 3

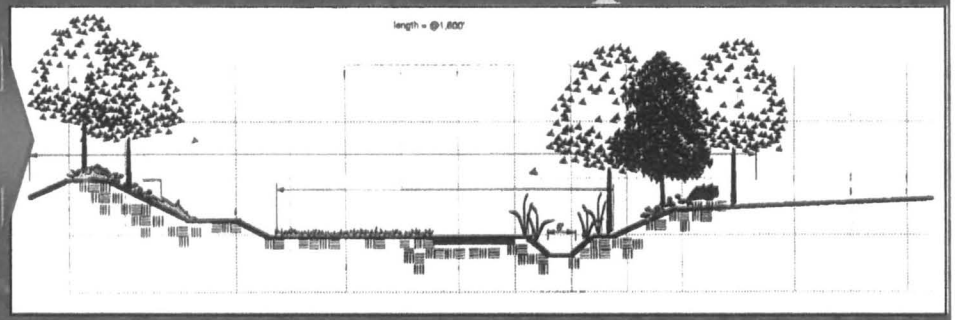
1983 Plan

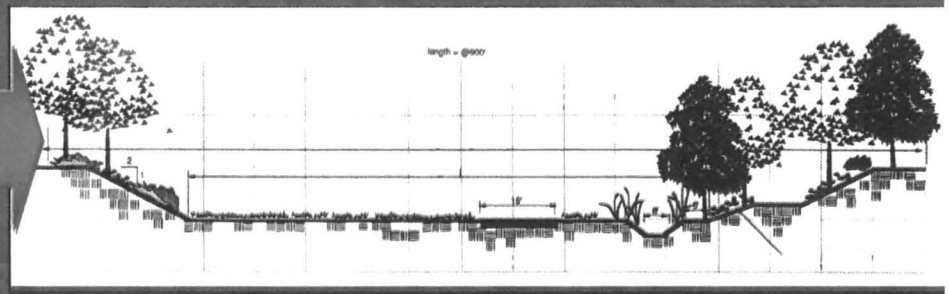


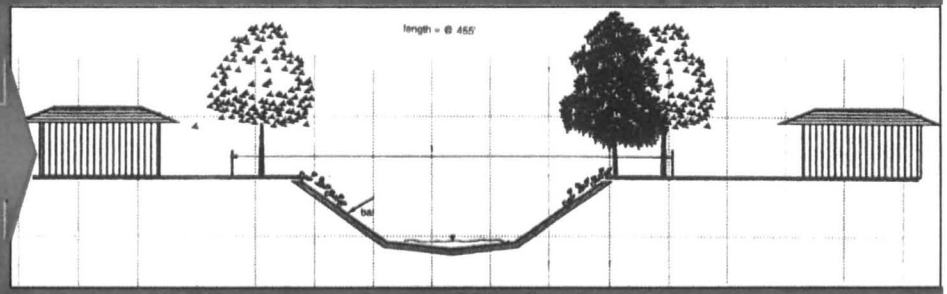




1998 Plan Update







Lower Silver Creek

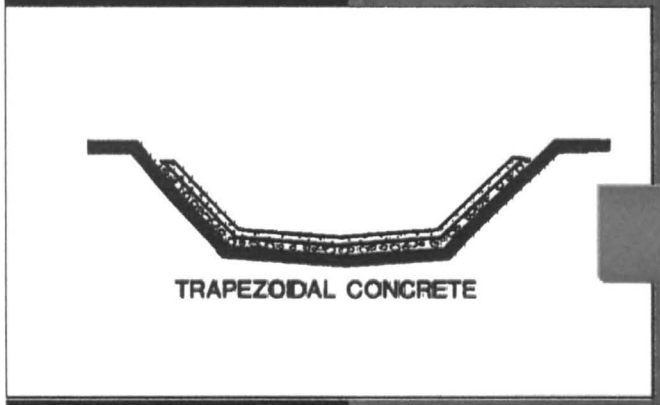
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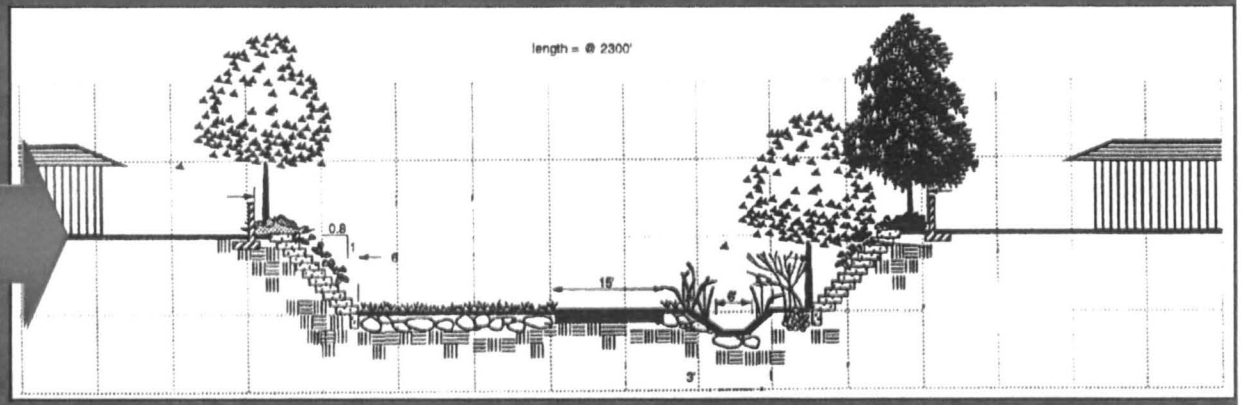
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Reach 4

1983 Plan



1998 Plan Update



Lower Silver Creek

Flood Protection and Creek Restoration Project

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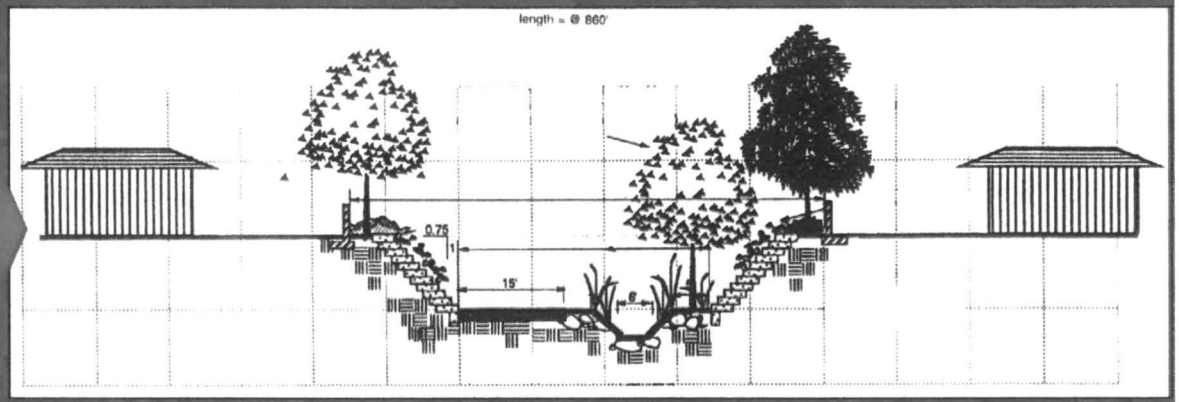
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Reach 5

1983 Plan



1998 Plan Update



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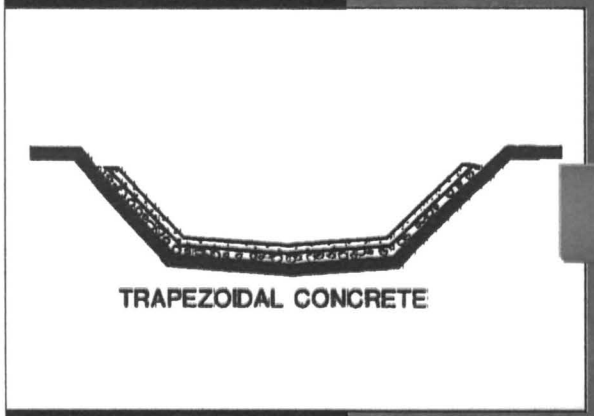
Flood Protection and Creek Restoration Project

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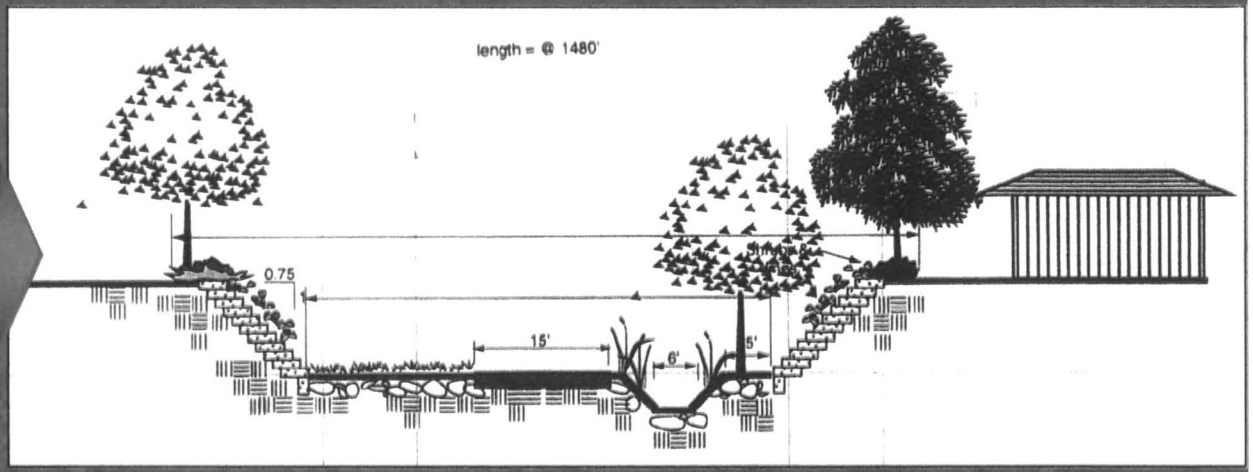
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Reach 6

1983 Plan



1998 Plan Update



Lower Silver Creek

Flood Protection and Creek Restoration Project

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Public Outreach for Lower Silver Creek

- Open House (Sept. 12, 2000)
- Creek tour (Sept. 23, 2000)
- Reach 3 neighborhood meetings
  - Sept. 28 (Identification of issues)
  - Oct. 12 (Criteria evaluation)
  - Oct. 26 (Alternative development)
- City of San Jose's Strong Neighborhood Initiative (SNI) coordination meetings

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Possible Enhancement Objectives

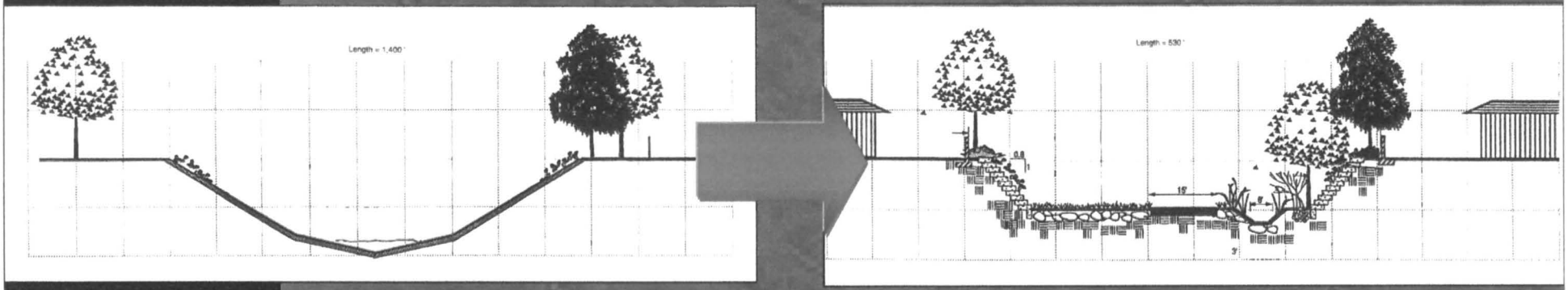
- Provide more wetland area by reducing amount of concrete channel lining
- Provide opportunities for public to access creeks:
  - Pocket parks
  - Trails
  - Educational/informational sites
- Improve water quality and conditions for fish
- Improve aesthetics of project elements

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Enhancement

Increase wetland area in Reach 1 by replacing proposed concrete-lined channel with vegetated block channel



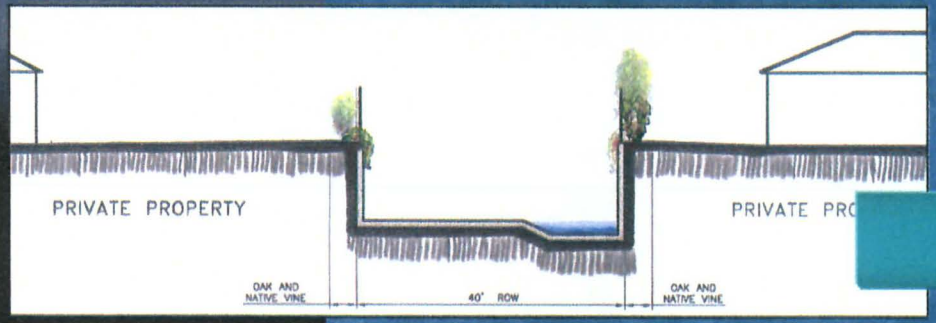
Approximate cost $1.0-1.5 Million
Increase wetland area 1.2 AC

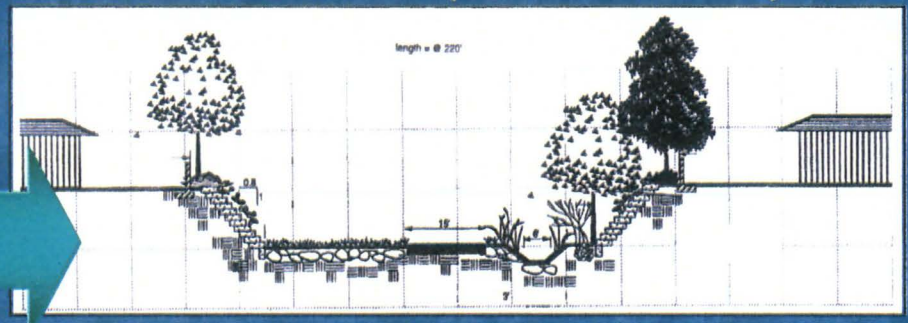
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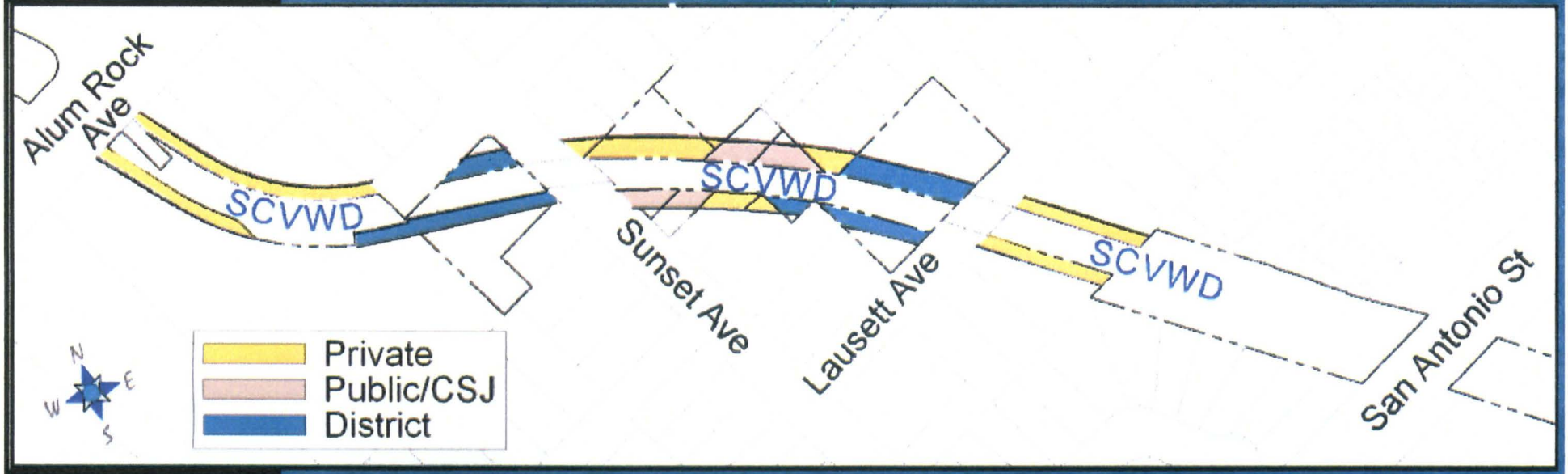
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Enhancement

Reduce amount of concrete lining by purchase of ROW between Alum Rock Ave. and San Antonio Rd. (Reach 3)







Approximate cost $3.5-4.5 Million
Increase wetland area 0.7 AC

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Enhancement

Creation of pocket parks in partnership with City to provide open spaces and additional habitat planting (Reach 3)



Approximate cost $200,000

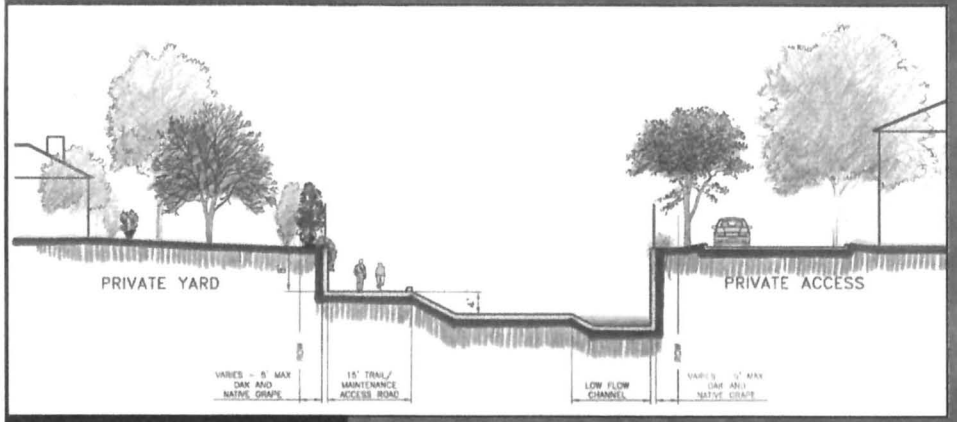
Increase upland habitat 1.0 AC

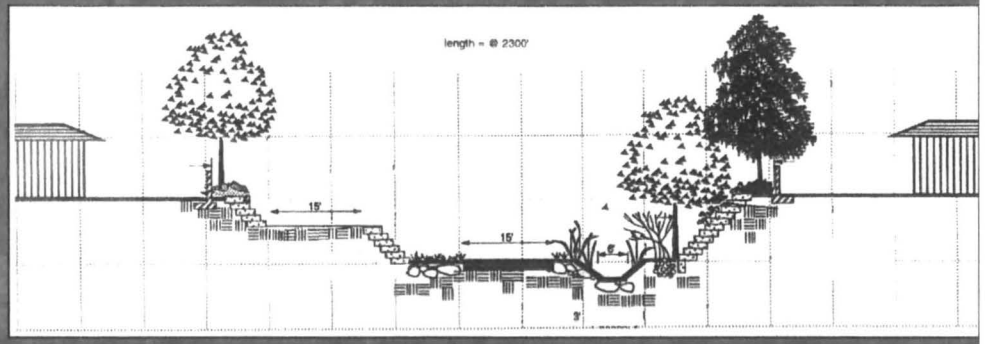
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Enhancement

Provide opportunities for trails to connect parks and neighborhoods along the creek







Approximate cost (Reach 1-3 only) $0-200,000

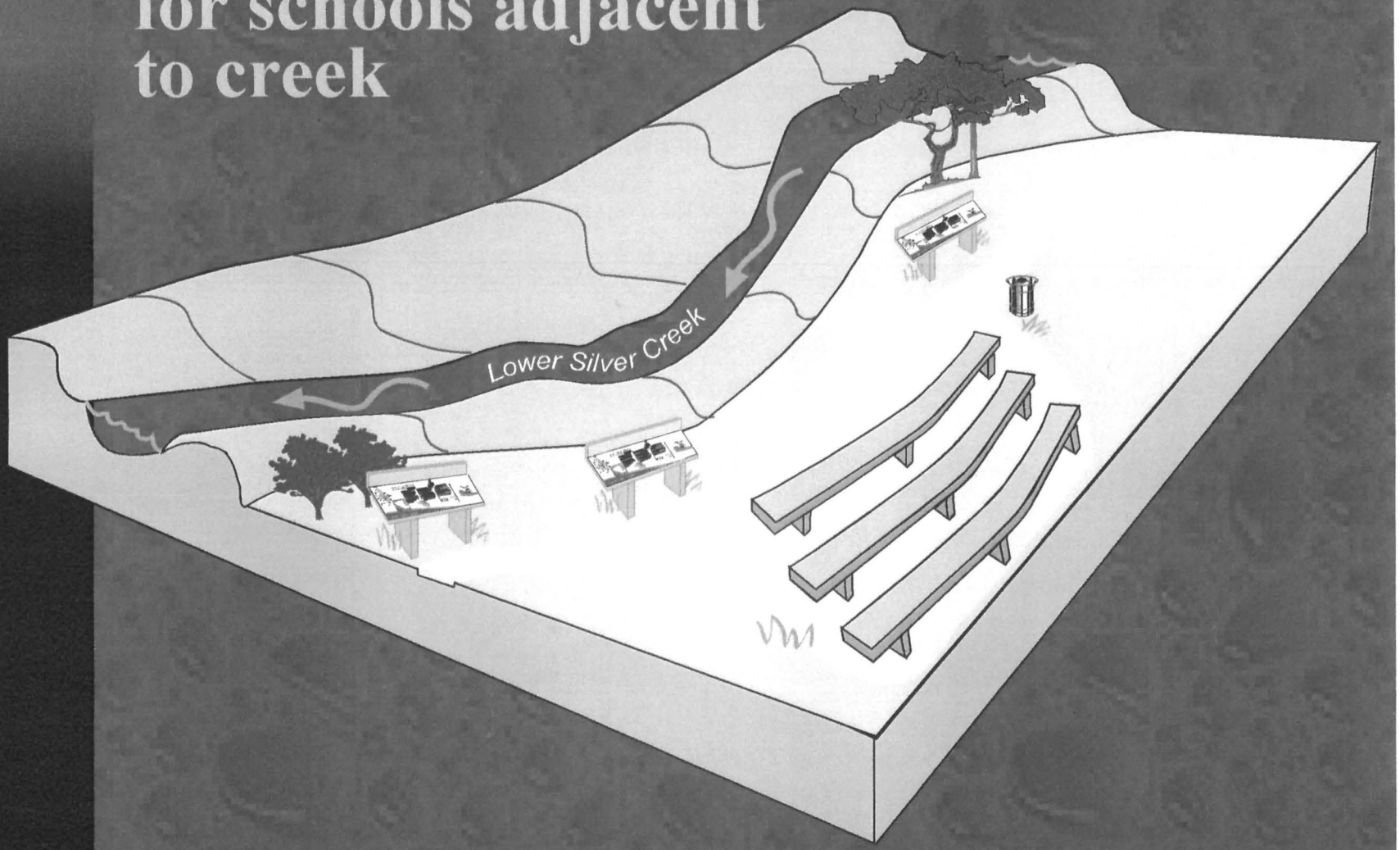
Increase floodwall height 1-2 feet

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Enhancement

Incorporate educational opportunities for schools adjacent to creek



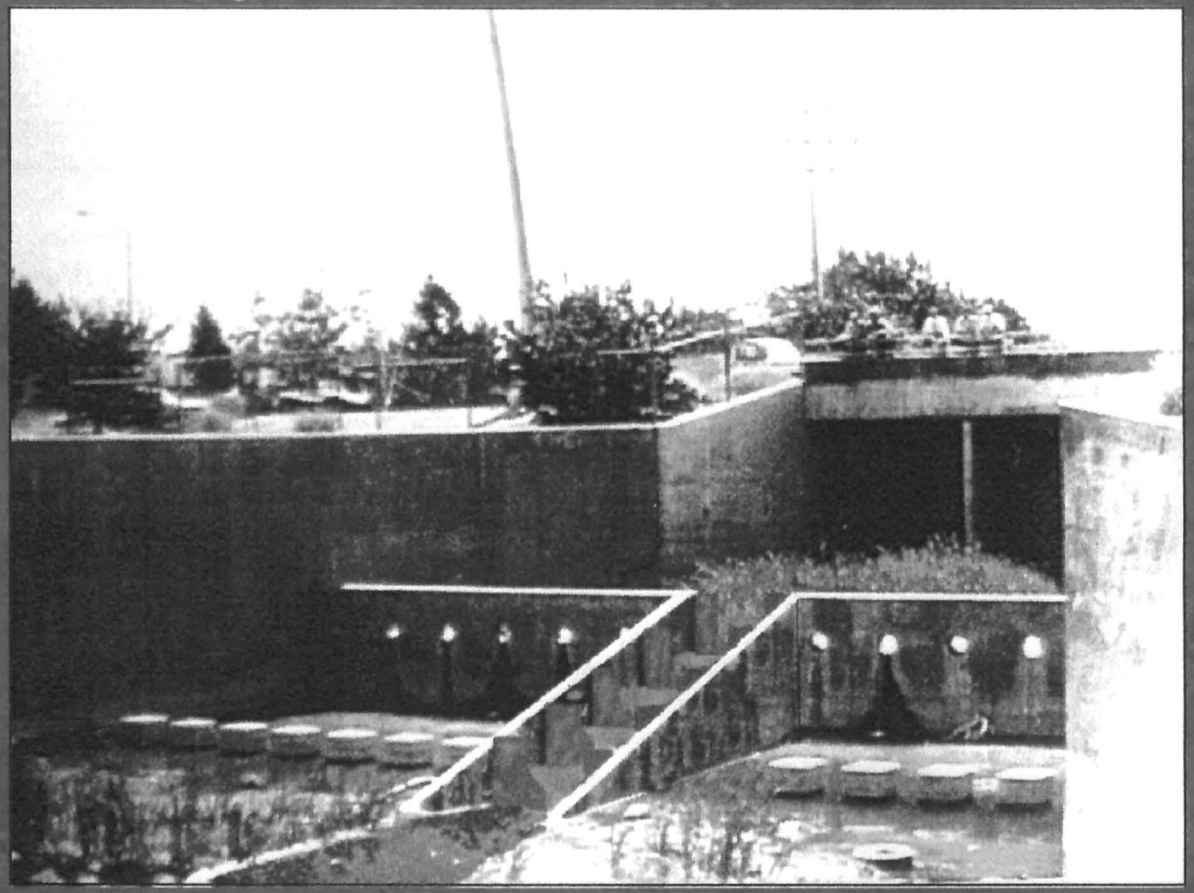
Approximate cost $15,000-20,000 per site

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Enhancement

Construct Fish Ladder Upstream of Lake Cunningham at Quimby Road



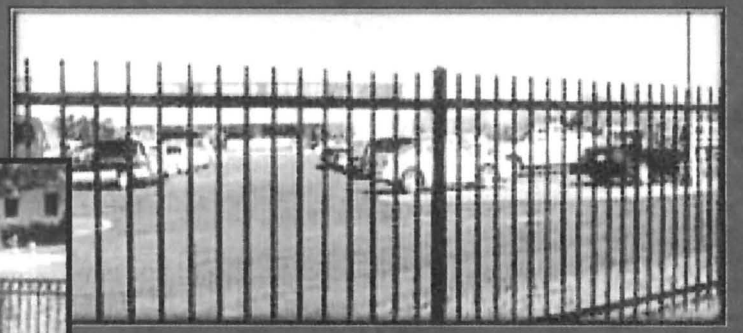
Approximate cost $ 1 Million

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Enhancement

Material upgrades in public areas (fence type and planting areas)





Approximate cost (Reaches 1-3) $350,000

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Summary Table

Description of Enhancement	Benefit	Cost
More wetland area - Reach 1c - Reach 3 u/s Alum Rock	 •1.2 Acre of wetland •1.0 Acre of wetland	 •$1 M •$3.5-4.5 M
Public access - Pocket parks - Trails R3 (not continuous) - Trails R3 (continuous) - School sites	 •1.0 Acre of upland habitat •5200 feet of trail system •6700 feet •Educational site	 •$200 k •$0-$200 k •$2.0-2.5 M •$15-20 k/Ea
Water quality/Fish passage - Fish ladder	•Fish passage	•$1 M
Project aesthetics - Wrought iron fence	•Aesthetics	•$350 k